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Interpretation in the Natural Areas: Enhancing the Visitor Experience

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An independent study project report by The McLean Contributionship Endowed Education Intern (2016-2017)

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Abstract
The natural areas at Morris Arboretum are one section of the gardens that have a strong need for new and updated interpretation. The existing panels in the wetland were outdated and weathered, while a newly-installed deer fence in Penn's Woods required directional signage. My project was to fill both of these needs, which I accomplished through collaboration with the interpretation team and other key stakeholders. With the assistance of the interpretation team, we developed new content. A graphic designer helped us to design five beautiful new panels for the wetland, while I designed a simple sign for the deer fence. This additional interpretation in the natural areas has high educational value and will enhance visitors' understanding and appreciation for the natural areas.

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ABSTRACT:

The natural areas at Morris Arboretum are one section of the gardens that have a strong need for new and updated interpretation. The existing panels in the wetland were outdated and weathered, while a newly-installed deer fence in Penn's Woods required directional signage. My project was to fill both of these needs, which I accomplished through collaboration with the interpretation team and other key stakeholders. With the assistance of the interpretation team, we developed new content. A graphic designer helped us to design five beautiful new panels for the wetland, while I designed a simple sign for the deer fence. This additional interpretation in the natural areas has high educational value and will enhance visitors' understanding and appreciation for the natural areas.

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BACKGROUND

Purpose and Scope

For visitors wishing to encounter native plants and wildlife, the natural areas of Morris Arboretum offer walking paths through naturalistic landscapes. Visitors can enjoy woodlands, meadows, and wetlands, all of which are rich habitat for native wildlife. Bringing visitors into contact with these areas presents a great opportunity to educate the public on the value of native plant and animal species, as well as habitat conservation. To achieve this goal, the presence of high-quality interpretation is essential and can greatly enhance the visitor experience.

Over time, a number of interpretive panels have been added to the natural areas at Morris Arboretum. These include a set of panels in the wetland, and some near the entrances to trails along Penn's Woods. All of these panels explore the characteristics, functions, and value of the managed habitats in the natural areas, highlighting plant or animal species that can be found there. Unfortunately, the nature of curating interpretation in a public garden is that signs can display outdated information and can experience significant physical wear. Additionally, the turnover of displays and exhibits creates a steady demand for new interpretation to be installed in the garden. Such is the case with interpretive panels in the natural areas.

My objective was to address these needs through two separate projects. The first was to replace a set of five interpretive panels in the wetland. Located in a floodplain and over a decade old, these signs had experienced some wear and tear. They were faded, cracked, collected debris, and had outdated information (Figure 1). My goal was to design and fabricate new signs that had updated content and conformed to Morris Arboretum's style. Much like the old set of signs, the content on the new panels seeks to educate visitors on floodplain habitats, showcasing the plants and animals that live there. I also planned to reuse the existing stanchion bases and relocate signs throughout the wetland trails to ensure they were located near the features they will interpret.

The second part of my project was slightly smaller in scope and addresses the need for interpretation on the deer exclosure. In January 2017, a new deer fence was installed in Penn's Woods, protecting one and a half acres of the area from deer herbivory. The fence intersects the walking trails at three points. At each of these locations, a black metal gate allows visitors to enter and continue along the path, but their lack of signage can be confusing for visitors. Anecdotal observations from the section leader suggest that visitors assume they are not allowed past the gate and will double back on the trail, which is a situation we would like to prevent. The second goal for my project was to develop inviting and easy-to-read signs to place on each gate and encourage visitors to open the gates.

Fortunately, new interpretation in the natural areas was a need that had been recognized and for which funding had been secured. In 2016, the Arboretum received a grant award from the Marshall-Reynolds Foundation for the purpose of continued habitat enhancements in the natural areas. A portion of this award was designated for interpretation, which funded this project and allowed us to invest in high-quality design and fabrication of new panels.

METHODS

Interpretation Team and Stakeholders

At Morris Arboretum, the Interpretation Team is a core group of education staff who develop and coordinate interpretive materials in the garden. As such, collaboration with the Interpretation Team was essential for the success of this project. My role was to lead the team on the project, but the rest of the group contributed greatly in giving guidance, proofing content, and helping with the logistics of fabrication and installation. After the Interpretation Team approved the content of the signs, proofs were reviewed by key stakeholders.

Installing signs with concise educational information may seem like a simple task, but interpretation in a public garden actually involves a significant number of stakeholders who must approve new signage. The interpretation team must cooperate with several staff from other departments to develop content, approve design, and install panels. Though feedback from so many different stakeholders can complicate the process, it is essential to create accurate content that is visually appealing and fits within the greater institution of Morris Arboretum. The list of involved staff members below illustrates the diversity of voices that are heard in the process of developing garden interpretation. The project required that each staff person give their input and approval before signs could be fabricated.

Staff Member	Role
Paul W. Meyer, *The F. Otto Haas Executive Director*	Overall approval
Anthony S. Aiello, *The Gayle E. Maloney Director of Horticulture and Curator*	Content and placement
Jessica Slade, *The McCausland Natural Areas Horticulturist*	Content and placement
Dr. Timothy A. Block, *John J. Willaman Director of Botany*	Accuracy of scientific information
Susan Crane, Director of Marketing	Design and branding
Thomas J. Wilson, *Director of Physical Facilities*	Installation
Mira Zergani, *Director of Development*	Funding acknowledgements

Table 1. Stakeholders in the interpretation design process

Wetland Signage

Content

The first step in the process of creating interpretation was to decide what story we wanted to tell. To do this, it was helpful to look at the old set of signs and decide what we thought was valuable, or what we thought was outdated or unimportant. The titles of the original signs were:

1. What is a Floodplain? *You're Standing on a Floodplain*
2. Preserving Floodplains: *People Put Pressure on Floodplains*
3. Streamside Buffers: *Protect Streams and Wildlife*
4. Wetlands: *Reduce Flooding and Filter Water, Wetlands Reduce Pollution*
5. Meadows: *Hold Soil and Slow Floods*

Essentially, the story told in the original wetland interpretation was the value of floodplains, and three different habitats found in a floodplain: streamside buffers, wetlands, and meadows. Each of these habitats had a panel describing characteristics of the habitat, the ecosystem services they provide, and the species that can be found there. Much of the information was site-specific, with photos from Morris Arboretum's wetland and a map of the Paper Mill Run floodplain. There were also mentions of Morris Arboretum's efforts to restore the area's natural streamside buffers, wetlands, and meadows.

After reviewing the old content, the Interpretation Team decided the general theme of the existing signs was valuable and should be carried over onto the new signs. We decided the overarching story would be defining a floodplain and characterizing floodplain habitats and their value. We continued with the previous theme of highlighting plants and animals that can be found in each habitat, but replaced many of the species that we knew to be uncommon in the area now (Figure 2). We consulted with the McCausland Natural Areas Horticulturist to understand which species were relevant and should be included. Additionally, we decided to reuse the original illustration of a cross-section of a floodplain.

In designing a new set of signs, we also wanted to add new content if possible. Because the wetland is such a rich habitat for wildlife, we planned to include more information about wildlife in the wetland. At the same time, being at an arboretum, we did not want to emphasize animals over plants. We compromised with a new sign titled "Animals Need Plants," (Figure 3) that describes the relationships between plants and animals in the wetland.

In the end, the old content was edited into information that was concise, readable, and pertinent to visitors interacting with the landscape. Outdated content about restoration projects or uncommon species were removed, and more information about wildlife was added. A draft of the content was sent to Jessica Slade, Tony Aiello, and Dr. Timothy Block, who gave feedback that was incorporated into the final draft. The final signs have the following titles.

1. What is a Floodplain? *Floodplains Filter Water, Floodplains Reduce Flooding*
2. Streamside Buffers: *Protect Streams and Wildlife*
3. Wetlands: *Reduce Flooding and Filter Water*
4. Meadows: *Hold Soils and Slow Floods*
5. Animals Need Plants: *Floodplain plants support wildlife*

Design & Fabrication

After the written content was finalized, the next step was graphic design. I worked with Imogen Design, an external graphic designer who has worked on interpretation projects for Morris Arboretum before. The designer was great to work with and highly efficient. I sent her our content and photos, and she quickly handed me a design that matched our panel style. This began the process of the designer sending proofs, which the Interpretation Team and I would send back with our edits, until we reached a design that we were completely happy with.

Sixteen proofs later, we had a set of five signs with a clean and visually-appealing design (Figure). We sent the final proof to Mira Zergani and Susan Crane to receive approval for design and acknowledgments. Paul Meyer also received the proof to give a final approval. After review by all stakeholders, quotes for fabrication were received by two companies, and we placed an order with Direct Embed Coating Systems, LLC. The finished panels were received in April 2017, just in time for peak seasonal visitation.

Stanchion Recovery & Installation

The new panels will be installed in locations that are appropriate for the information on each sign. For instance, the "Meadows" sign will be installed in a location with a view of the area's meadows. At the same time, each sign will be placed in a way that does not interrupt important sight lines, such as the view of the wetland from the road or the view of the Gemination Sequence sculpture. Furthermore, the new sign locations are spread deeper into the wetland trails, as opposed to being concentrated near the trail entrance, as the old signs were. Of the five old signs, three will be removed and relocated to more appropriate areas (Figure 4).

In order to reduce costs, reuse of the existing stanchions was a key goal for this project. Fortunately, it was determined that the stanchions were in fine condition to reuse. Upon arrival of the new panels, some of the old stanchions will be removed from the wetland. All five will be modified to remove the lip around the bottom edge of the panel. The new signs will be mounted to the old stanchions, and they will be installed 24 inches deep, grounded in concrete. Both removal and installation will be performed by Wissahickon Contractors. Installation is projected to be completed by the end of April or early May.

Deer Fence Signage

The signage for the deer exclosure will be more directional than educational. With such a simple message, the most important part of the content was a clear welcome, so the word, "ENTER," covers almost half of the sign. The panel also very briefly explains how to open the fence, and identifies the purpose of the exclosure (Figure 5). I designed the panels using Adobe Photoshop CS 6, creating proofs in multiple color combinations. The Interpretation Team went to the site of the fence and observed the visual effect of the different color combinations to determine the most effective proof.

The final proof was reviewed by Jessica Slade and Tony Aiello. We are in the process of determining the sign material and fabrication company. These panels should be installed on all three gates of the fence by the end of April or early May.

RESULTS AND DISCUSSION

As attendance peaks this spring, an increasing number of visitors will be exploring Morris Arboretum's natural areas. As guests enjoy the beauty of the wetlands, meadows, and Penn's Woods, the addition of interpretation should complement their experience. The hope is that guests will leave with an enhanced understanding of, and appreciation for, these habitats. The wetland panels will educate visitors on the ecological and economic value of floodplain ecosystems, while the deer exclosure will demonstrate the impact of deer herbivory on Pennsylvania's native flora. Something to explore in the future is the addition of interpretation that further explains the impact of deer browsing and what the deer fence will achieve.

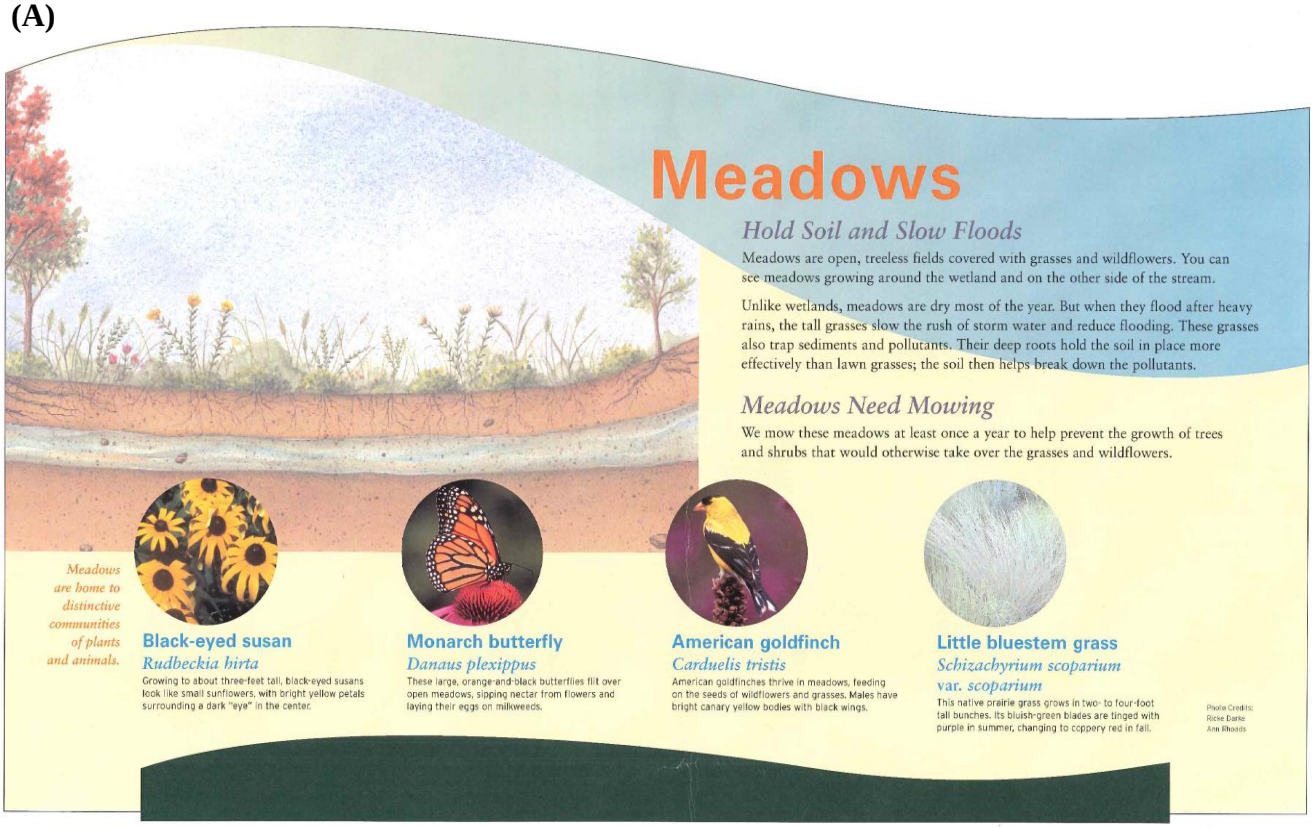
As this project progressed, it became apparent that the biggest challenge was collaboration and cooperation from other departments outside of Education. In communicating with stakeholders during the phase of content development, each staff member had a different opinion about what kind of information should be included and how it should be presented. However, the result was a series of discussions and compromises that I believe created a better end product. Similarly, installing the wetland signs was a long and arduous process. Though the order for the panels was submitted in January, they were not paid for until March, delaying their receipt by several weeks. Furthermore, it was determined that the removal and installation of the wetland stanchions would be done by an outside contractor, adding another layer of cross-department meetings. However, this will hopefully set a precedent as to how interpretive signs should be removed and installed in the future. Timely cooperation is essential for interpretation projects, which span multiple departments, especially when funding is to be used within a particular timeline.

ACKNOWLEDGEMENTS

This project would not have been possible without the guidance and assistance of Jan McFarlan, Liza Hawley, Bryan Thompson-Nowak, Stacey Kutish, and Bob Gutowski. Thank you to Bob Gutowski, Paul Meyer, Marc Radell, Mary Ann Smith, and Gretchen Dowling who graciously provided photos for the panel designs. Finally, thank you to the Marshall-Reynolds Foundation for funding this project.

FIGURES

(A)



(B)

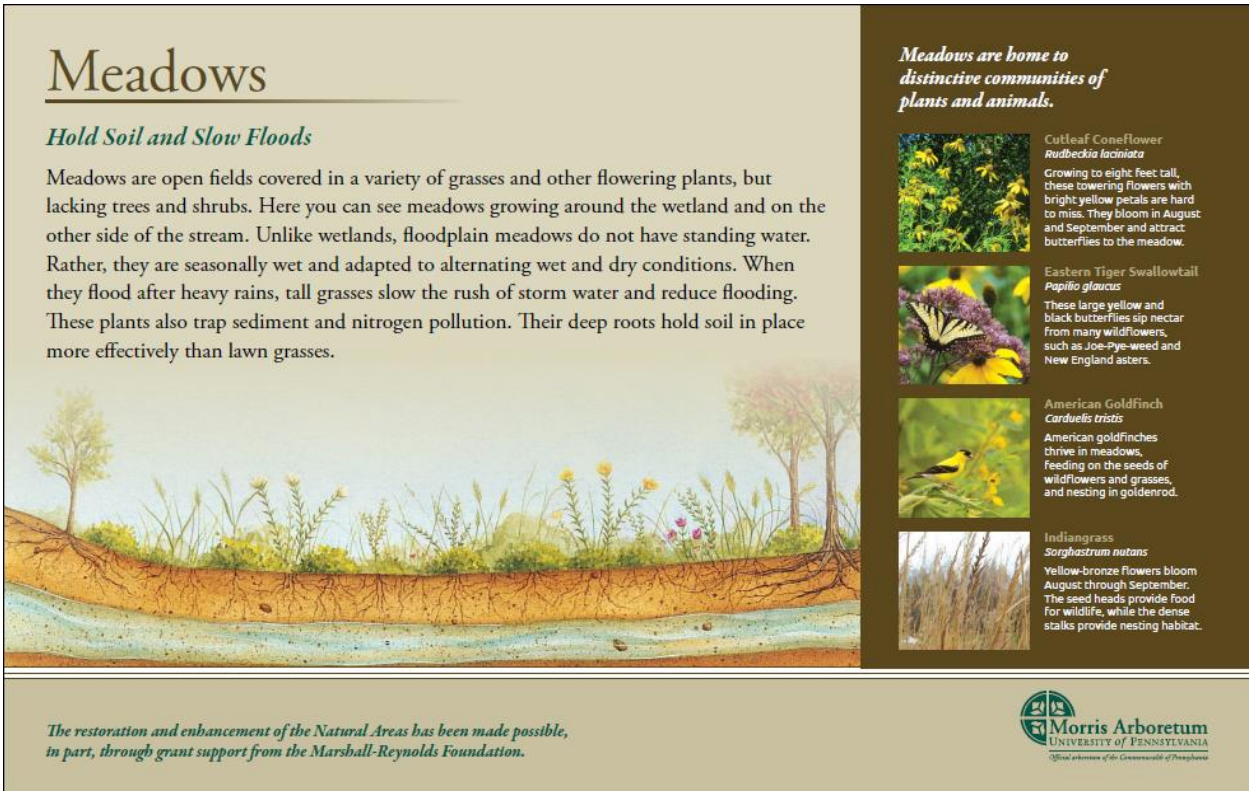


Figure 2. **(A)** The old design for the Meadows sign, which features four species found in meadows. **(B)** This theme was carried over to the new design.

Figure 3. One of the new panels, with entirely new content about the relationship between plants and animals in the wetland area.

(A)

(B)

Figure 4. Aerial views of the wetland area, with signs represented by yellow squares. **(A)** Shows how the old set of signs were located along the trail. **(B)** Shows how the new set of signs are more widely distributed along the trails.

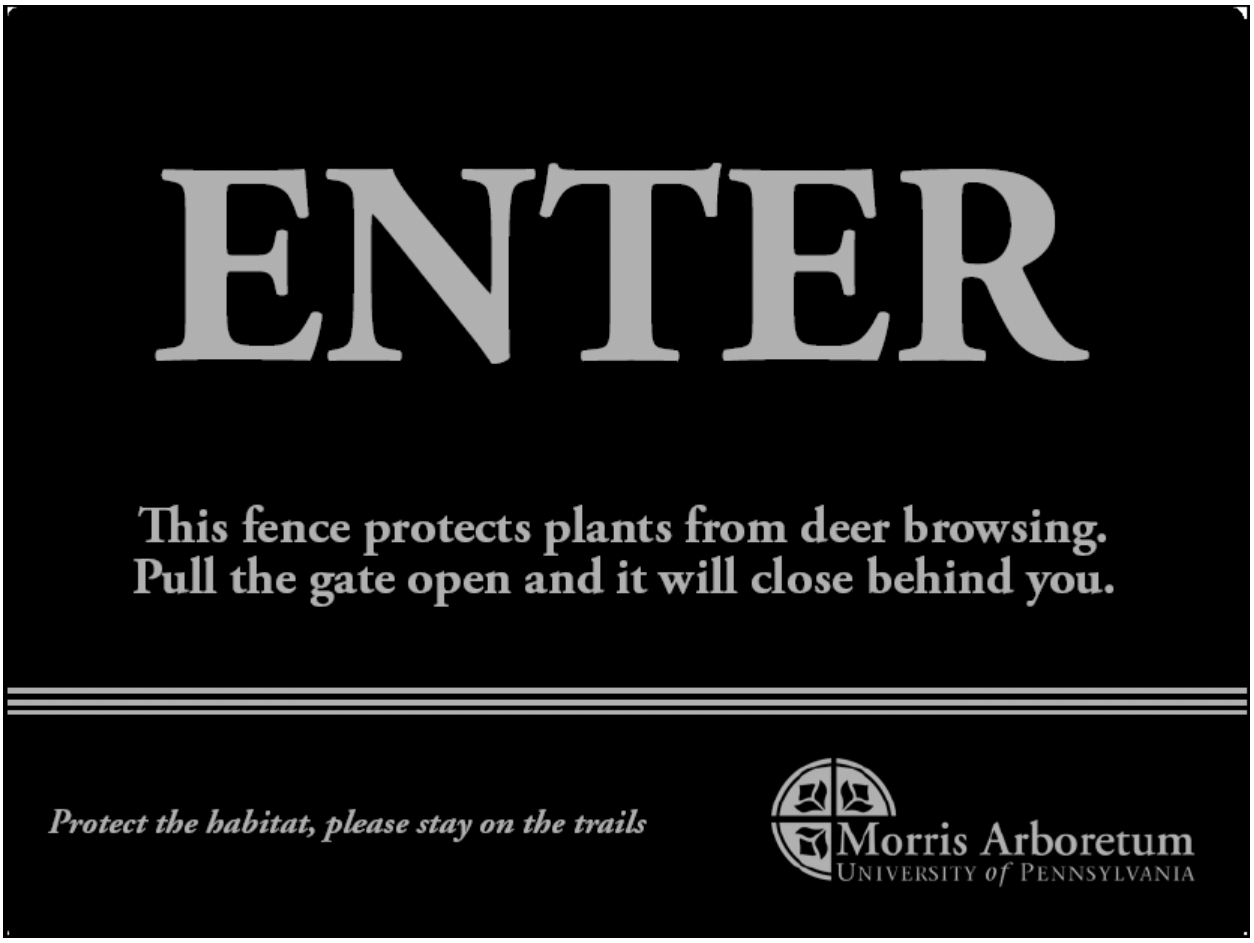


Figure 5. The final design for the deer fence signage.

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